

**Claims:** I claim:

1. A hand rehabilitation device to be worn by an individual for the purpose of improving finger flexion range of motion of an injured hand by applying simultaneous composite dynamic flexion forces to selected fingers, said hand rehabilitation device having a volar support component at the selected fingers and comprising:
  - (a) a glove having a back hand side, a palm side and selected fingers extending therefrom for comfortably fitting onto a hand of an individual;
  - (b) tabs attached to the end of each selected glove finger, said tabs to provide a means for removable attachment to a substantially rigid crossbar in order to assist with the transfer of dynamic forces to said selected fingers of an individual's hand;
  - (c) a substantially rigid crossbar with means to transfer a dynamic force from an outrigger to said selected fingers of an individual's hand, said crossbar having the means: to receive removable attachments of said tabs of paragraph (b) above, to receive removable attachments of an outrigger at each end, and to selectively restrict the rotation of the outrigger about the longitudinal axis of said crossbar;
  - (d) an outrigger with means: to transfer a dynamic force of an elastic component to a crossbar, of removable attachment to the ends of a crossbar, to allow its' selective restriction of rotation around the longitudinal axis of a crossbar, and of removable attachment to an elastic component;
  - (e) a elastic component with means of removable attachment to an outrigger, and means of removable attachment to an individual wearing the device.

2. The hand rehabilitation device of claim 1 wherein the tabs attached to the selected fingers of the glove are of a mating loop material and the attachment means of the crossbar is a mating hook material.
3. The hand rehabilitation device of claim 1 wherein the crossbar length is made suitable to the number of selected fingers.
4. The hand rehabilitation device of claim 1 wherein there are three means of adjustability: tabs of the selected fingers of the glove may be attached in different selected locations, the angular position of the outrigger in relation to the longitudinal axis of the crossbar may be selectively fixed, and the size of the elastic component and its' attachment point may be varied.
5. The hand rehabilitation device of claim 1 wherein the crossbar has a slotted arrangement at one end to selectively restrict outrigger rotation around the longitudinal axis of said crossbar.
6. The hand rehabilitation device of claim 1 wherein the crossbar has holes in each end to receive the ends of the outrigger.
7. The hand rehabilitation device of claim 1 wherein the outrigger is of a substantially rigid material that will transfer a dynamic force adequately to the crossbar, but also has material flexibility that allows it to be placed into the ends of the crossbar.
8. The hand rehabilitation device of claim 1 wherein the elastic component may attach to the outrigger or the wearer in any number of acceptable manners currently in use.
9. The hand rehabilitation device of claim 1 wherein there is a means of restraining the glove from sliding distally during its use.

10. The hand rehabilitation device of claim 9 wherein the restraining member is a strap securely fixed to the glove and having a mating loop and hook fastener to secure its closure around the wearer's hand or wrist.

11. The hand rehabilitation device of claim 1 wherein the elastic component may be replaced with a static or static progressive component.

12. A hand rehabilitation device to be worn by an individual for the purpose of improving finger flexion range of motion of an injured hand by applying simultaneous composite dynamic flexion forces to fingers 2, 3, 4, and 5, said hand rehabilitation device having a volar support component to the fingers and comprising:

- (a) a glove having a back hand side, a palm side and five fingers extending therefrom for comfortably fitting onto a hand of an individual;
- (b) tabs attached to the end of glove fingers 2, 3, 4, & 5, said tabs to provide a means for removable attachment to a substantially rigid crossbar in order to assist with the transfer of composite dynamic flexion forces to said fingers of the individual's hand;
- (c) a substantially rigid crossbar with means to transfer a dynamic force from an outrigger to said fingers of an individual's hand, said crossbar having the means: to receive removable attachments of said tabs of paragraph (b) above, to receive removable attachments of an outrigger at each end, and to selectively restrict the rotation of an outrigger about the longitudinal axis of said crossbar;
- (d) an outrigger with means: to transfer a dynamic force of an elastic component to a crossbar, of removable attachment to the ends of a crossbar, to allow its' selective

restriction of rotation around the longitudinal axis of a crossbar, and of removable attachment to an elastic component;

(e) a elastic component with means of removable attachment to an outrigger, and means of removable attachment to an individual wearing the device.

13. The hand rehabilitation device of claim 12 wherein the tabs attached to the fingers of the glove are of a mating loop material and the attachment means of the crossbar is a mating hook material.

14. The hand rehabilitation device of claim 12 wherein the crossbar has holes at each end to receive the ends of the outrigger.

15. The hand rehabilitation device of claim 12 wherein the crossbar has a slotted arrangement at one end to selectively restrict outrigger rotation around the longitudinal axis of said crossbar.

16. The hand rehabilitation device of claim 12 wherein the outrigger is of a substantially rigid material that will transfer a dynamic force adequately to a crossbar but has material flexibility that allows it to be placed into the ends of a crossbar.

17. The hand rehabilitation device of claim 12 wherein the elastic component may attach to the outrigger or the wearer in any number of acceptable manners currently in use.

18. The hand rehabilitation device of claim 12 wherein there is a means of restraining the glove from sliding distally during its use.

19. The hand rehabilitation device of claim 18 wherein the restraining member is a strap securely fixed to the glove and having a mating loop and hook fastener to secure its closure around the wearer's hand or wrist.

20. The hand rehabilitation device of claim 12 wherein the elastic component may be replaced with a static or static progressive component.